

REMARKS

In light of the following remarks, reconsideration of the present application is respectfully requested. Claims 1, 3-22 and 24-29 are pending. Claims 26-29 have been withdrawn. Claims 1 and 17 are independent. No new matter is added.

Allowable Subject Matter

Applicants appreciate the Examiner's indication that claims 10 and 14-16 represent allowable subject. As all of the claims are believed to be allowable, claims 10 and 14-16 remain in dependent form.

Rejections under 35 U.S.C. § 102

Claims 1, 3-9, 11-13, 17-19, 21, 22 and 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Cepak et al. "Fabrication and characterization of concentric-tubular composite micro- and nanostructures using the template-synthesis method," (March 1998), hereinafter "Cepak." Applicants respectfully traverse this rejection for the following reasons.

1. Claim 1 requires, *inter alia*, "forming a particle layer on an inner wall of the reactor by ...drying the reactor." At least this feature is not disclosed or suggested by Cepak.

Cepak discloses a polyester membrane having pores. Outer Au tubules are deposited inside the pores of the polyester membrane. The polyester is then dissolved. The Au tubules are then immersed in a solution, removed from the solution and cured in an oven.

The Examiner relies on the curing of Cepak to teach the “drying” and the polyester membrane to teach the “reactor” of claim 1. However, the polyester membrane is dissolved before the curing takes place. Thus, the polyester membrane is never dried, it is dissolved before the Au tubules are cured. Accordingly, Cepak fails to disclose or suggest the “forming a particle layer on an inner wall of the reactor by ... drying the reactor,” as required by claim 1. By contrast, the polyester membrane in Cepak is dissolved before drying.

Claims 3-16, which are dependent on claim 1, are patentable for at least the reasons set forth above regarding claim 1.

2. Claim 17 requires, *inter alia*, a particle layer including “composite particles supporting a functional material” provided on an inner wall of a reactor. At least this feature is not disclosed or suggested by Cepak.

As disclosed above, the Examiner relies on the polyester membrane of Cepak to teach the “reactor” of claim 17. Thus, the Examiner relies on the Au tubules of Cepak to teach the “particle layer” of claim 17, since the Au tubules are on the inner wall of the polyester membrane. However, Au is not a composite particle supporting a functional material. Accordingly, Cepak fails to disclose or suggest a particle layer including “composite particles supporting a functional material” provided on an inner wall of a reactor, as required by claim 17.

Furthermore, claim 17 requires, *inter alia*, “a particle layer including particles.” This feature is also not disclosed or suggested by Cepak.

As stated above, the Examiner relies on the Au tubules of Cepak to teach the “particle layer” of claim 17. However, even if the Au tubules of Cepak are regarded as a particle layer of claim 17 (which Applicants do not admit), one Au tubule does not include plural particles because the Au tubule is formed by deposition. As such,

Cepak fails to disclose or suggest the "particle layer including particles," as required by claim 17.

Claims 18-19, 21-22 and 24, which are dependent on claim 17, are patentable for at least the reasons set forth above regarding claim 17.

For at least the foregoing reasons, Applicants respectfully request that the Examiner withdraw the rejection of claims 1, 3-9, 11-13, 17-19, 21, 22 and 24 under 35 U.S.C. § 102(b).

Rejections under 35 U.S.C. § 103

Claims 20 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cepak. Applicants traverse this rejection for the following reasons.

The Examiner correctly acknowledges that the features of claims 20 and 25 are absent from Cepak, but alleges that these features are obvious to one of ordinary skill in the art. Even assuming *arguendo* that the features of claims 20 and 25 are obvious to one of ordinary skill in the art (which Applicants do not admit), Cepak is still deficient with respect to the above-described features of claim 17. Thus, Cepak fails to render claims 20 and 25 obvious.

CONCLUSION

In view of the above remarks and amendments, the Applicants respectfully submit that each of the pending objections and rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

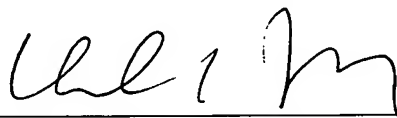
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Donald J. Daley at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKY, & PIERCE, P.L.C.

By



Donald J. Daley, Reg. No. 34,313
P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

DJD/BMH:drl